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NPIC/D-30-62 23 February 1962

MEMORANDUM FOR: Deputy Director (Research)

ATIN:

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SUBJECT:

Relationship Between NPIC's Equipment Development

Efforts and Functions of DD/R

As per your verbal request of 21 February I have had

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hastily assemble the draft elements of a Staff Study on the

subject and forward it herewith for your information.

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ARTHUR C. LUNDAHL
Director

National Photographic Interpretation Center

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NPIC

Relationship of NPIC Equipment Development Effort and Functions of DD/R

I. PROBLEM

NPIC's equipment development effort faces the possibility of being separated from the Center because of the appointment of a Deputy Director for Research and Development and the formation of an organization to support this function.

II. FACTS

- A. NPIC has been directed by the National Security Council Intelligence Directive #8 of 18 January 1961, "to engage in or sponsor, as appropriate, the development of specialized equipment for the intelligence exploitation of photography, and shall provide information about such specialized equipment to interested elements of the intelligence community for their own possible use or further adaptation."
- B. NPIC has a Technical Plans and Development Staff whose primary function is to recommend to the Director, NPIC, the development and/or procurement of technical equipment to be applied to the efficient exploitation of reconnaissance photography.

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III. DISCUSSION

- A. In order to carry out its assigned functions, the TP&D Staff must work in direct proximity and continuously coordinate its development effort with the Center operational components. This is absolutely necessary because the technical equipment employed directly affects the operating procedures and techniques, which in turn must be related to rate, volume, and distinct characteristics of photography received from many programs for timely exploitation.
- B. NPIC's development effort is directed primarily at technical equipment which has a direct application to the solution or accommodation of distinct exploitation problem areas.
- C. In order to properly plan NPIC's development programs, an acute and current awareness must be had of not only NPIC's capabilities, but also of the technical nature and scheduling of intended photographic inputs to the Center. Direct liaison with operational collection program personnel is provided through the TP&D Staff for this critical and extremely sensitive purpose.
- D. The TP&D Staff has the responsibility for reporting on its activities and receiving advice from all components of the Center and accomplishes this on a weekly basis through the mechanism of the Technical Development Committee, chaired by the Chief, TP&DS.
- E. On about a quarterly basis, the Chief, TP&DS, convenes a

 Joint Procurement Meeting, attended by representatives of all military
 services and government agencies which are customers of the photographic

collection programs. The purpose is to inform all cleared non-NPIC components of NPIC's development plans and to coordinate these with the development programs of their components which are being carried forward in support of separate departmental requirements. The end result is a photographic exploitation development effort which contains a minimum of duplication and a maximum of efficiency and takes advantage of the collective knowledge of the very latest in the state of technology.

IV. CONCLUSIONS AND RECOMMENDATIONS

- A. It is recommended, and imperative, that the NPIC technical development program remain as an integral component of the Center. To remove this support from direct in-house proximity with the NPIC operating departments will have a deleterious effect on NPIC's enviable state of readiness to receive any and all reconnaissance program materials for efficient and timely analysis.
- B. NPIC should be expected to establish close working relation-ships with DD/R, including the sharing of budgetary information and the option for DD/R to be represented at the Joint Procurement Meetings referred to in para III E.

Position I

"DDR Control of all technical phases of ELINT"

Budgeting of entire program

Research, Development, Engineering, Testing

Operational Support (Personnel and Planning)

Analysis and Evaluation

Tasking and Feedback

Liaison (R&D)

Training and Career Management

NRO Support

NSA, AF Support

Support to policy and national guidance

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ELINT

Under the recent organization the various aspects of CIA's ELINT program have been the responsibility of a large number of Agency components including OSI, OC, TSD/DDP, DFD/DDP and other divisions of DDP. Coordination of the ELINT program has been accomplished through an ELINT Advisory Committee and an ELINT Staff Officer. The fractionation of responsibility, the highly technical nature of the operations and the severe security measures of the Soviets have made it particularly difficult to provide meaningful research, development and deployment of clandestinely utilized ELINT equipment. Budgeting procedures and fiscal problems of the O/C and the area divisions of DDP have also increased the difficulty of exploiting fully this technical but fruitful source of intelligence. Unified control of the entire program beginning with research and continuing through collection, analysis and feedback is believed to be required.

It is therefore considered necessary that all technical phases of the CIA ELINT program be assigned to the Deputy Director for Research. This should include responsibility for the budget of the entire program and for technical personnel support to the DDP where such personnel are required in the planning or conduct of collection operations. Under this concept, personnel would be supplied to Area Divisions to operate Agency

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manned collection efforts, along the lines of the present Project, 25X1A6a or to fill Headquarters or liaison positions as required. DDR personnel would not direct agent or clandestine ELINT collection efforts but would provide technical support as necessary.

To effect this change of responsibility, it will be necessary to transfer to the DDR portions of the functions, assets and personnel of OSI, OC, DPD/DDP, TSD/DDP and possibly FI/D/DDP. Exact details of transfer required must be subject to full discussions with all other Deputy Directors and with the components concerned.

Policy guidance of the Agency ELINT program as it affects the National SIGINT Program and Plans would be accomplished through a SIGINT Staff in OCI. DDR would supply qualified ELINT personnel to the SIGINT Staff for this purpose and would remain responsible for all technical support to the Staff.

The CIA COMINT program would continue to operate under present assignment of responsibility. Coordination of COMINT and ELINT programs, projects and plans would be accomplished between DDR and the CIA SIGINT Staff as appropriate.

Technical advice and assistance, as appropriate, will be obtained from NSA.

POSITION I

Advantages

- (1) A complete package with only a few "whiskers" as to the work
 to be accomplished -(policy is somewhat split with OCI
 and requirements with OSI.)
- (2) Easy to designate components to be transferred to DDR.
- (3) Possibly would do most to clear up ELINT R&D situation without addition of other complicating factors.

Disadvantages

- (1) Maintains split in COMINT and ELINT within the Agency in face of community SIGINT plans.
- (2) Increases difficulty of policy coordination with OCI on SIGINT liaison.
- (3) Continues difficulty of SIGINT project and program planning.
- (4) Limits capability to establish a meaningful Career Service plan and provide for personnel rotation.
- (5) Duplicatory R&D more difficult to control.

Position II

"DDR Control of all technical phases of SIGINT"

- A. ELINT as in Position I
- B. COMINT

Budgeting of R&D, Testing and Evaluation
Research, Development, Engineering, Testing
Operational Support (Personnel and Planning)
Analysis for R&D purposes
Liaison

Training and Career Management

SIGINT (Signals Intelligence)

Within the U.S. intelligence community there has been a growing awareness of the gains to be realized by a close coordination of COMINT and ELINT programs, analysis and exploitation. USIB has recently decided to merge its COMINT and ELINT Committees in order to provide more effective policy guidance in these fields. These programs within CIA traditionally have been separated and have been supported and controlled by entirely different mechanisms. It is clear that the establishment of a unified CIA SIGINT program will allow a more efficient and productive utilization of manpower, funds and technical assets. The mutual improvement provided by common research, development, analysis, and operations has been amply demonstrated.

It is therefore considered highly desirable and feasible that responsibility for all technical aspects of the Agency's COMINT and ELINT programs be assigned to the DDR and that a SIGINT organization be effected. This assignment should include responsibility for budgeting for the entire program with the single exception of COMINT collection projects carried out through subsidy of liaison services. All aspects of research, development, engineering, testing, training, analysis, and personnel management applicable to the CIA Sigint program should be the responsibility of the DDR. Personnel required for the operation of technical equipment should be supplied by the DDR in the same manner as now provided by OC for and for close support COMINT operators.

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To effect this assignment of responsibility, it will be necessary to transfer to the DDR some of the functions, assets and personnel of OSI, OC, DPD/DDP, TSD/DDP and FI/D/DDP. Complete details of such transfers will require discussions with DDI, DDS and DDP as well as with components concerned.

Policy guidance of the Agency SIGINT program will be affected through the SIGINT Staff of OCI. Qualified ELINT personnel will be supplied to the SIGINT Staff to assist in policy matters. Coordination of SIGINT requirements, tasking and feedback would be accomplished between the SIGINT Staff and DDR SIGINT personnel. Technical advice, assistance and direction, as appropriate, will be obtained from NSA.

Position II

SIGINT

Advantages

- (1) Follows community trend toward SIGINT organizations.
- (2) Will allow more flexible personnel assignment and rotation.
- (3) Mutual improvement resulting from common research, development, analysis and operations.
- (4) Should make coordination of policy and operations more feasible, (Relations with OCI)

Disadvantages

- (1) Increase percentage of operator and technician personnel in DDR as contrasted to engineering and scientific types.
- (2) Considerable logistic support required (particularly overseas).
- (3) Creates a language training problem.
- (4) Does not fully concentrate all related research and development within the Agency.
- (5) Probably increased difficulty in establishing responsibilities as related to present organizations (particularly FT/D).

Position III

"DDR control of all technical aspects of SIGINT and R,D,T and E aspects of COM SEC, Communications and Special Electronic Equipment"

- SIGINT as in Position II
- B. COM SEC

Research, Development, Testing

Liaison

Analysis for R&D purposes

Field Operations for R&D

Training

C. Communications

Research, Development, Testing of Agent Communication Equipment Basic Communications Research

Liaison

D. Spreint Electronie, R&D, TAE airbonne Radar

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III

SIGINT and Electronics R&D

Within the U.S. intelligence community there has been a growing awareness of the gains to be realized by a close coordination of COMINT and ELINT programs, analysis and exploitation. USIB has recently decided to merge its COMINT and ELINT Committees in order to provide more effective policy guidance in these fields. These programs within CIA traditionally have been separated and have been supported and controlled by entirely different mechanisms. It is clear that the establishment of a unified CIA SIGINT program will allow a more efficient and productive utilization of manpower, funds and technical assets. The mutual improvement provided by common research, development, analysis, and operations has been amply demonstrated.

In order to centralize CIA research and development in overlapping or related fields, it further seems desirable to effect a close relationship between SIGINT research, development, and analysis and similar aspects of communications, Communications Security (COM SEC), and other electronic development programs. Basic propagation research, agent communications equipment development and Communication Security analysis problems would particularly benefit from a close working relationship with SIGINT elements.

It is therefore considered highly desirable and feasible that responsibility for all technical aspects of the Agency's COMINT and ELINT programs be assigned to the DDR and that a SIGINT organization be effected. This assignment should include responsibility for budgeting for the entire program with the single exception of COMINT collection projects carried out through subsidy of liaison services. All aspects of research, development, engineering, testing, training, analysis and personnel management applicable to the CIA SIGINT program should be the responsibility of the DDR. Personnel required for the operation of technical equipment should be supplied by the DDR in the same manner as now provided by OC for and and for close support COMINT operations.

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The close association of communications research, agent communications equipment development, COM SEC research and development, and special electronic developments with the CIA SIGINT program also should be accomplished by assignment to the Deputy Director for Research.

To effect this assignment of responsibility, it will be necessary to transfer to the DDR some of the functions, assets and personnel of OSI, OC, DPD/DDP, TSD/DDP and FI/D/DDP. Complete details of such transfers will require discussions with DDI, DDS and DDP as well as with components concerned.

Policy guidance of the Agency SIGINT program will be effected through the SIGINT Staff of OCI. Qualified ELINT personnel will be supplied to the SIGINT Staff to assist in policy matters. Coordination of SIGINT requirements, tasking and feedback, would be accomplished between the

SIGINT Staff and DDR SIGINT personnel. Technical advice, assistance and direction, as appropriate, will be obtained from NSA.

Position III

SIGINT and Electronics R&D

Advantages

- (1) Consolidates all related, R,D,T and E on electromagnetic phenomena with consequent mutual advantage and improved efficiency and effectiveness.
- (2) Allows greater conformance to intelligence requirements.
- (3) Provides a Career Service potential with overseas rotations potential.
- (4) Other advantages related in Position II.

Disadvantages

- (1) Makes a rather large package with diverse applications to be considered.
- (2) Brings about in certain areas (notably agent ops and CIA communications) a hiatus between personnel developing and operating the equipment.
- (3) Certain to create real difficulties in separation from present components.
- (4) Other disadvantages listed in Position II (except 4)

This is some old material prepared, I believe,

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by Probably should be filed

in Organization - might be of some historical

interest some time.